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DERWENT-WEEK: 200718

TITLE: Annealing method for tialn layer

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ABSTRACTED-PUB-NO: KR2001036045A

BASIC-ABSTRACT:

NOVELTY - An annealing method for a TiAlN layer is provided to control a defect
such as electro-migration by improving a tensile stress characteristic
regarding the TiAlN layer, and to increase capacitance and improve a leakage
current characteristic of a capacitor having a metal-insulator-metal(MIM)
structure by nitrifying the surface of the TiAlN layer to prevent oxygen from

being diffused from a dielectric layer.

DETAILED DESCRIPTION - An insulating layer(102) is deposited on a semiconductor substrate(100) having a lower structure. A contact hole is formed on the insulating layer. A TiAlN layer(104) for a **capacitor electrode** having a metal-insulator-metal(MIM) structure is formed on the resultant structure having the contact hole by a chemical **atomic layer** deposition method. A rapid thermal nitridation(RTN) is performed in an atmosphere including any one of nitrogen, oxygen and inert gas to reduce tensile stress regarding the TiAlN layer.

CHOSEN-DRAWING: Dwg.1/10

TITLE-TERMS: ANNEAL METHOD LAYER

DERWENT-CLASS: L03 U11

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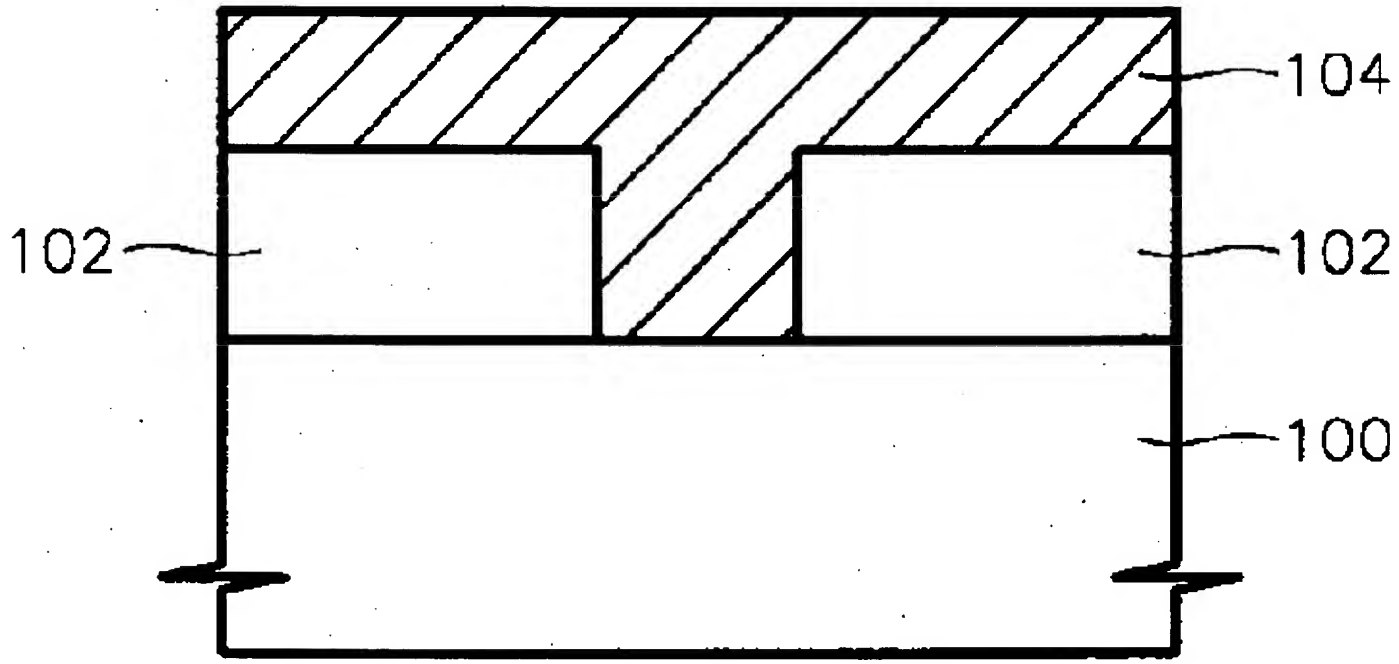
104
102
102
100